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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Complete if Known	
				Application Number	09/989969
				Filing Date	November 20, 2001
				First Named Inventor	David Kisailus
				Art Unit	N/A
				Examiner Name	Not Yet Assigned
Sheet	1	of	1	Attorney Docket Number	LA-1279-342.US/10024731

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U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
MAA	AA	6254675	07/03/2001	PUCHINGER MANFRED et al	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
MAA	BA	EP 0 295 467 A	12/21/1988	EASTMAN KODAK CO		

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¹ Applicant's unique citation designation number (optional). ² See attached Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MAA	CA	RODEWALD D ET AL: "GAN DERIVED FROM CARBODIIMIDE-BASED POLYMER PRECURSORS" ADVANCED MATERIALS, VCH VERLAGSGESELLSCHAFT, WEINHEIM, DE., vol. 11, no. 18, 17 December 1999, pages 1502-1504	

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Examiner Signature	Matthew Anderson	Date Considered	8/19/2003
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PAGE 1 OF 4

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

FEB 1 5 2002

Docket Number (Optional)
1279-342XX/16924731

Application Number
09/989,969

#4

Applicant(s)
DAVID J. KISAILUS, et al.

Filing Date
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Group Art Unit
Not Yet Assigned

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

*EXAMINER INITIAL		
MA	AC	Fiorentini, V., Bernardini, F., Bosin, A., Vanderbilt, D., in: M. Scheffler, R. Zimmermann (Eds.), <u>Proceedings of the 23rd International Conference on Physics of Semiconductors, World Scientific, Singapore, 1996, p. 2877, "Ab Initio Shallow Acceptor Levels in Gallium Nitride"</u>
MA	AD	Fix, R., Gordon, R.G. and Hoffman, D.M., <u>Chem Mater.</u> , 1990, 2, 235, "Synthesis of Thin Films by Atmospheric Pressure Chemical Vapor Deposition Using Amido and Imido Titanium (IV) Compounds as Precursors"
MA	AE	Fix, R., Gordon, R.G., and Hoffman, D.M., <u>Chem Mater</u> , 1991, 3, 1138, "Chemical Vapor Deposition of Titanium, Zirconium, and Hafnium Nitride Thin Films"
MA	AF	House, D.A., "Amonia and Amines", in <u>Comprehensive Coordination Chemistry</u> . "The Synthesis, Reactions, Properties & Application of Coordination Compounds". Ed., Wilkinson, Sir Geoffrey, Pergammon Press, New York, 1987.
MA	AG	Janik, J.F. and Wells, R.L., <u>Chem. Mater.</u> , 1996, 8, 2708. "Gallium Imide, $\{Ga(NH)_{3/2}\}_n$, a New Polymeric Precursor of Gallium Nitride Powders"
MA	AH	Leroux, M., et al., <u>Materials Science and Engineering</u> , 1997, B50, 97., "Luminescence and Reflectivity Studies of Undoped, n- and p-doped GaN on (0001) Sapphire"
MA	AI	L'vov, Boris V, <u>Theomochimica Acta</u> , 2000, 360, 85. "Kinetics and Mechanism of Thermal Decomposition of GaN"
MA	AJ	Miller, K.T., Lange, F.F. and Marshall, D.B., <u>Journal Materials Research</u> , 1990, 5, 151, "The Instability of Polycrystalline Thin Films: Experiment and Theory"
MA	AK	Neumayer, D.A., and Ekerdt, J.G., <u>Chem. Mater</u> , 1996, 8, 9. "Growth of Group III Nitrides. A Review of Precursors and Techniques"
MA	AL	Noth, H. and Konrad, P., <u>Z. Naturforsch</u> , 1975, 30b, 681 "Darstellung, Struktur und einige Reaktionen von Tris (dimethylamino) Gallan" ("Preparation, Structure and Some Reactionsof Trisdimethylaminogallane")
MA	AM	Okada, L.A., and George, S.M., <u>Applied Surface Science</u> , 1999, 137, 113, "Absorption and Desorption Kinetics of Tetrakis (dimethylamino) Titanium andDimethylamine on TiN"
MA	AN	Onitsuka, T., et al., <u>Journal Crystal Growth</u> , 1998, 189/190, 295, "Interface Structure of GaN onSapphire (0001) Studied by Transmission Electron Microscope"

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Michael Anderson

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FEB 15 2002

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

MA

AO

Panda, S., et al., *Thin Solid Films*, 1999, 357, 125, "Low Temperature Chemical Vapor Deposition of Titanium Nitride Films From Tetrakis (Ethylmethylamido) Titanium and Amonia"

MA

AP

Rodewald, D., et al., *Advanced Materials*, 1999, 11, 1502, "GaN Derived from Carbodiimide-Based Polymer Precursors"

MA

AQ

Sun, Y.M. et al., *Materials Science in Semiconductor Processing*, 1999, 2, 253, "Aluminum Titanium Nitride Films Grown With Multiple Precursors"

MA

AR

Strecker, A., Salzberger, U., and Mayer, J., *Prakt Metallogr.*, 1993, 30, 482, "Specimen Preparation for Transmission Electron Microscopy: Reliable Method for Cross-Sections and Brittle Materials"

MA

AS

Vande Walle, C.G., Stampfl, C., Neugebauer, *Journal of Crystal Growth*, 1998, 189/190, 505, "Theory of Doping and Defects in III-V Nitrides"

MA

AT

Weiller, B.H. and Partido, B.V., *Chem. Mater.*, 1994, 6, 260, "Flow-Tube Kinetics of Gas-Phase Chemical Vapor Deposition Reactions: TiN from Ti(NMe₂)₄ and NH₃"

MA

AU

Livage, J., Henry, M., and Sanchez, C., *Prog. Solid State Chem.*, 1988, 18, 259, "Sol-Gel Chemistry of Transmition Metal Oxides"

MA

AV

Brinker, C.J. and Scherer, G.W., *Sol-Gel Science*, Academic Press, New York, 1990, "The Physics and Chemistry of Sol-Gel Processing"

MA

AW

Chandler, C.D., Roger, C., and M.J. Hampden-Smith, *Chem. Rev.*, 1993, 93, 1205, "Chemical Aspects of Solution Routes to Perovskite-Phase Mixed-Metal Oxides from Metal-Organic Precursors"

MA

AX

Leroy, E., Robin-Brosse, C., and Torre, J.P., in *Ultrastructure Processing of Cermics, Glasses, and Composites*, Edited by L.L. Hench and Ulrich, D.R., Wiley-Interscience Publication, New York 1984, Chapter 18, "Fabrication of Zirconia Fibers from Sol-Gels"

MA

AY

Kim, J.H., and Lange, F.F., *Journal of Materials Research*, 1999, Vol. 14, No. 10, 4004, "Epitaxial Growth of PbZr 0.5 Ti0.5O3 Thin Films on (001) LaAlO3 by the Chemical Solution Deposition Method"

MA

AZ

Langjahr, P.A., Wagner, T., Ruhle, M., and Lange, F.F., *Journal of Materials Research*, 1999, Vol. 14, 2945, "Thermally Induced Structural Changes in Epitaxial SrZrO3 Films on SrTiO3"

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Seifert, A., Lange, F.F., and Speck, J.S., *Journal of Materials Research*, 1995, Vol. 10, 680, "Epitaxial Growth of PbTiO₃ Thin Films on (001) SrTiO₃ from Solution Precursors"

Miller, K.T., Chan, C.I., Cain, M.G., and Lange, F.F., *Journal of Materials Research*, 1993, Vol. 8, 169, "Epitaxial Zirconia Thin Films from Aqueous Precursors"

Balkas, C.M., and Davis, R.E., *Journal of American Ceramic Society*, 1996, 79, 2309, "Synthesis Routes and Characterization of High-Purity, Single-Phase Gallium Nitride Powders"

Thompson, C.V., *Annu. Rev. Mater. Sci.*, 1990 20, 245, "Grain Growth in Thin Films"

Thompson, C.V., Floro, J. and Smith, H.I., *Journal of Applied Physics*, 67, (1990), "Epitaxial Grain Growth in Thin Metal Films"

Miller, K.T. and Lange, F.F., *Journal of Materials Research*, Vol. 6, (1991), pg. 2387 "Highly Oriented Thin Films of Cubic Zirconia on Sapphire Through Grain Growth Seeding"

Wells, R.L. and Gladfelter, W.L., *Journal of Cluster Science*, Vol. 8 (1997), pg. 217, "Pathways to Nanocrystalline III-V (13-15) Compound Semiconductors"

Waggoner, K.M., Olmstead, M.M. and Power, P.P., *Polyhedron*, Vol. 9, (1990), pg. 257, "Structural and Spectroscopic Characterization of the Compounds..."

Puchinger, M., Wagner, T., Rodewald, D., Bill, J., Aldinger, F., and Lange, F.F., *Journal of Crystal Growth*, 208, (2000), pg. 153, "Gallium Nitride Thin Layers Via a Liquid Precursor Route"

Puchinger, M., Wagner, T., Fini, P., Kisailus, D., Beck, U., Bill, J., Aldinger, F., Arzt, E. and Lange, F.F., *Journal of Crystal Growth*, 233, (2001), pg. 57, "Chemical Solution Deposition Derived Buffer Layers for MOCVD-Growth GaN Films"

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